Annual WATER QUALITY REPORT

Reporting Year 2011

Presented By

Tuolumne Utilities District

Meeting the Challenge

Tuolumne Utilities District (TUD) once again is proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. TUD is thoroughly committed to delivering the best-quality drinking water possible to you and your family. As new challenges to drinking water safety emerge, TUD is vigilant in meeting the goals of source water protection, the highest-quality water treatment and delivery, water conservation, community outreach, and education while continuing to serve the needs of all our water users. Thank you for being a customer of Tuolumne Utilities District and for allowing us to continue providing you with high-quality drinking water.

To better assist you with the information provided in this report, please visit the TUD website at www.tudwater.com to view which water treatment plant serves your area. Should you ever have any questions or concerns, we encourage you to contact us.

Community Participation

You are invited to attend our regularly scheduled Board meetings held on the second and fourth Tuesdays of each month, beginning at 7:00 p.m. in the Tuolumne Utilities District boardroom, at 18885 Nugget Boulevard, Sonora, California. Current information is available on our website at www.tudwater.com. The Board meetings can be viewed live on our website and in our meeting archives.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.

Where Does My Water Come From?

The most important factor in water quality is its source. There are two sources of supply from which Tuolumne Utilities District (District, or TUD) receives its water: from surface water that originates from rainfall and runoff from snowpack in the Sierra Nevada Mountains and from groundwater wells. The District is composed of 17 water service areas, 14 surface water treatment plants, and 31 active wells.

Approximately 96% of TUD's annual water needs are met with surface water; the other 4% is met with groundwater either as a primary source or a backup source. In 2010, the Sonora-Jamestown System supplied water to the Cuesta Center-Lambert Lakes System and supplemental water to the East Sonora and Mono Village Systems.

To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed at www.epa.gov/surf.

Source Water Assessment

An assessment of the drinking water sources for all TUD water systems was completed in 2002-2003. A copy of the complete assessment of each system may be viewed at the Department of Health Services Water Field Operations Branch, Merced District Office, 265 W. Bullard Avenue, Suite 101, Fresno, California 93704.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet, twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org or visit www.waterfootprint.org to see how the water footprints of other nations compare.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

QUESTIONS?

For more information about this report, or any questions relating to your drinking water, please call Don Perkins, Water Superintendent, at (209) 532-5536, extension 554.

Fact or Fiction

Tap water is cheaper than soda pop. *(Fact: You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a single six-pack of soda pop. And water has no sugar or caffeine.)*

Methods for the treatment and filtration of drinking water were developed only recently. *(Fiction: Ancient Egyptians treated water by siphoning water out of the top of huge jars after allowing the muddy water from the Nile River to settle. And Hippocrates, known as the father of medicine, directed people in Greece to boil and strain water before drinking it.)*

A typical shower with a non-low-flow shower head uses more water than a bath. *(Fiction: A typical shower uses less water than a bath.)*

Water freezes at 32 degrees Fahrenheit. *(Fiction: You can actually chill very pure water past its freezing point (at standard pressure) without it ever becoming solid.)*

The Pacific Ocean is the largest ocean on Earth. *(Fact: The Atlantic Ocean is the second largest and the Indian Ocean is the third largest.)*

A single tree will give off 70 gallons of water per day in evaporation. *(Fact)*

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables to the left show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Iron and manganese were found at levels that exceed the secondary MCLs (SMCLs) of 300 ppb and 50 ppb, respectively. These SMCLs were set to protect you against unpleasant aesthetic effects such as color, taste, odor, and the staining of plumbing fixtures and clothing while washing. Since violating these SMCLs does not pose a risk to public health, the state allows the affected community to decide whether or not to treat or remove it. The high iron and manganese levels come from our wells that are mainly used as back-up sources normally used during the annual ditch outage which is approximately seven days a year.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Apple Valley AMOUNT DETECTED (RANGE, LOW-HIGH)	Big Hill AMOUNT DETECTED (RANGE, LOW-HIGH)	Cedar Ridge AMOUNT DETECTED (RANGE, LOW-HIGH)	Columbia/Gibbs AMOUNT DETECTED (RANGE, LOW-HIGH)	Crystal Falls/ Willow Springs AMOUNT DETECTED (RANGE, LOW-HIGH)	Cuesta Center/ Lambert Lakes AMOUNT DETECTED (RANGE, LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2009	10	0.004	ND	ND	ND	ND	ND	ND	No	Erosion of natural deposits; Runoff from orchards; Glass and electronics production wastes
Barium (ppm)	2009	1	2	ND	ND	ND	0.06 (ND–0.12)	ND	ND	No	Discharges of oil drilling wastes and from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2011	[4.0 (as Cl2)]	[4 (as Cl2)]	0.7 (0.4–1.0)	1.5 (1.4–1.5)	1.4 (1.3–1.5)	1.8 (1.6–2.0)	1.7 (1.6–1.8)	1.1 (0.8–1.6)	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2011	TT	NA	NA	NA	1.2 (0.9–2.1)	NA	1.4 (1–2.1)	1 (0.8–1.8)	No	Various natural and man-made sources
Fluoride (ppm)	2009	2.0	1	0.15 (0.15–0.16)	ND	0.08 (ND–0.16)	0.11 (ND–0.22)	0.085 (ND–0.17)	ND	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2006	15	(0)	0.2 (ND–2.5)	ND	0.7 (ND–1.38)	0.75[1] (ND–1.5)	0.44 (ND–2.3)	ND	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2011	60	NA	ND	36.5 (28–42)	29.8 (18–36)	52.9 (42–65)	45.5 (39–55)	25.1 (2.3–38)	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2011	45	45	1.4 (ND–4.1)	ND	ND	ND	ND	ND	No	Runoff and leaching from fertilizer use; Leaching from septic tanks and sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	ND	44 (33–58)	29.3 (16–43)	50.5 (32–68)	41.5 (36–46)	46.8 (31–60)	No	By-product of drinking water disinfection
Turbidity[3] (NTU)	2011	TT	NA	NA	0.27 (0.09–0.27)	0.21 (0.07–0.21)	0.5 (0.09–0.5)	0.45 (0.13–0.45)	0.5 (0.07–0.5)	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	NA	100	100	99.4	99.1	98.7	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	Apple Valley 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Big Hill 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Cedar Ridge 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Columbia/Gibbs 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Crystal Falls/ Willow Springs 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Cuesta Center/ Lambert Lakes 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0.3	0.535 (0/5)	0.0014 (0/10)	0.084 (0/10)	0.11 (0/20)	0.15[4] (0/20)	0.19 (0/5)	No	Internal corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2011	15	0.2	1.3 (0/5)	ND (1/10)	4.9 (1/10)	4 (1/20)	6.1[4] (1/20)	7.9 (0/5)	No	Internal corrosion of household water plumbing systems; Discharges from industrial manufacturers; Erosion of natural deposits

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	East Sonora AMOUNT DETECTED (RANGE, LOW-HIGH)	Mono Village AMOUNT DETECTED (RANGE, LOW-HIGH)	Monte Grande/ Curtis Creek AMOUNT DETECTED (RANGE, LOW-HIGH)	Peaceful Pines AMOUNT DETECTED (RANGE, LOW-HIGH)	Phoenix Lake AMOUNT DETECTED (RANGE, LOW-HIGH)	Ponderosa AMOUNT DETECTED (RANGE, LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2009	10	0.004	ND	ND	ND	ND	2	ND	No	Erosion of natural deposits; Runoff from orchards; Glass and electronics production wastes
Barium (ppm)	2009	1	2	ND	ND	ND	ND	ND	ND	No	Discharges of oil drilling wastes and from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2011	[4.0 (as Cl2)]	[4 (as Cl2)]	1.2 (0.4–1.7)	1.2 (0.76–1.5)	1.8 (1.6–2.0)	1 (0.6–1.7)	1.1 (0.8–1.3)	1.6 (1.3–1.7)	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2011	TT	NA	NA	1 (0.8–1.8)	NA	NA	NA	1.3 (0.9–2)	No	Various natural and man-made sources
Fluoride (ppm)	2009	2.0	1	0.08 (ND–0.15)	ND	NA	0.2	0.14	ND	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2006	15	(0)	2.7[1] (ND–3.7)	0.84[1] (ND–2.0)	ND[1]	1.08[1]	2 (1.4–3.04)	ND	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2011	60	NA	39.5 (33–49)	40 (35–46)	55.5 (50–64)	ND	14[2]	35 (30–41)	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2011	45	45	6 (ND–12)	ND	ND	ND	ND	ND	No	Runoff and leaching from fertilizer use; Leaching from septic tanks and sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	39.3 (30–54)	40 (31–54)	54.8 (49–64)	2[2]	27[2]	28.3 (21–35)	No	By-product of drinking water disinfection
Turbidity[3] (NTU)	2011	TT	NA	NA	0.5 (0.07–0.5)	0.24 (0.09–0.24)	NA	NA	0.29 (0.10–0.29)	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	NA	98.7	100	NA	NA	100	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	East Sonora 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Mono Village 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Monte Grande/ Curtis Creek 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Peaceful Pines 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Phoenix Lake 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Ponderosa 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0.3	0.18 (0/5)	0.18[4] (0/10)	0.17 (0/10)	0.034 (0/5)	0.34 (0/5)	0.13[2] (0/10)	No	Internal corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2011	15	0.2	1.2 (0/5)	ND[4] (0/10)	ND (1/10)	1.1 (0/5)	2.5 (0/5)	11[2] (1/10)	No	Internal corrosion of household water plumbing systems; Discharges from industrial manufacturers; Erosion of natural deposits

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Scenic View AMOUNT DETECTED (RANGE, LOW-HIGH)	Sonora/Jamestown AMOUNT DETECTED (RANGE, LOW-HIGH)	Tuolumne AMOUNT DETECTED (RANGE, LOW-HIGH)	Upper Basin AMOUNT DETECTED (RANGE, LOW-HIGH)	Wards Ferry AMOUNT DETECTED (RANGE, LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2009	10	0.004	ND	ND	ND	ND	ND	No	Erosion of natural deposits; Runoff from orchards; Glass and electronics production wastes
Barium (ppm)	2009	1	2	ND	ND	ND	ND	ND	No	Discharges of oil drilling wastes and from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2011	[4.0 (as Cl2)]	[4 (as Cl2)]	1.6 (1.5–2.1)	1.7 (1.5–2.0)	1.5 (1.3–1.6)	1.7 (1.6–1.9)	0.4 (0.1–1.0)	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2011	TT	NA	1.2 (0.9–1.9)	1 (0.8–1.8)	1.2 (0.8–1.7)	1.3 (0.8–3.2)	NA	No	Various natural and man-made sources
Fluoride (ppm)	2009	2.0	1	ND	ND	ND	0.04 (ND–0.16)	ND	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2006	15	(0)	9[2] (ND–24)	ND	ND	0.88[1] (ND–4.25)	ND	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2011	60	NA	31.5 (29–34)	27.7 (13–46)	33.8 (22–42)	37 (29–48)	ND	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2011	45	45	ND	ND	ND	ND	11	No	Runoff and leaching from fertilizer use; Leaching from septic tanks and sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	26.5 (26–27)	36 (23–57)	34 (21–43)	25 (23–29)	2.3[2]	No	By-product of drinking water disinfection
Turbidity[3] (NTU)	2011	TT	NA	0.26 (0.06–0.26)	0.5 (0.07–0.5)	0.27 (0.06–0.27)	0.28 (0.06–0.28)	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	100	98.7	100	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	Scenic View 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Sonora/ Jamestown 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Tuolumne 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Upper Basin 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Wards Ferry 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0.3	0.18[2] (0/10)	0.026[4] (0/30)	0.18[2] (0/10)	0.09 (0/10)	0.5[2] (0/5)	No	Internal corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2011	15	0.2	2.5[2] (0/10)	ND[4] (0/30)	9[2] (1/10)	9 (1/10)	4.6[2] (0/5)	No	Internal corrosion of household water plumbing systems; Discharges from industrial manufacturers; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Apple Valley AMOUNT DETECTED (RANGE, LOW-HIGH)	Big Hill AMOUNT DETECTED (RANGE, LOW-HIGH)	Cedar Ridge AMOUNT DETECTED (RANGE, LOW-HIGH)	Columbia/Gibbs AMOUNT DETECTED (RANGE, LOW-HIGH)	Crystal Falls/ Willow Springs AMOUNT DETECTED (RANGE, LOW-HIGH)	Cuesta Center/ Lambert Lakes AMOUNT DETECTED (RANGE, LOW-HIGH)	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2009	300	NS	47 (ND–140)	ND	550 (ND–1,100)	ND	233 (ND–710)	ND	Yes	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2009	50	NS	13 (ND–39)	ND	76.5 (13–140)	ND	87 (ND–240)	150[5]	Yes	Leaching from natural deposits
Sulfate (ppm)	2009	500	NS	7.3 (5.1–11)	ND	3.4 (ND–6.7)	4.4 (ND–8.7)	2.6 (ND–6.6)	ND	No	Runoff/leaching from natural deposits; Industrial wastes
Zinc (ppm)	2009	5.0	NS	0.026 (ND–0.079)	0.44[5]	ND	ND	0.048 (ND–0.099)	ND	No	Runoff/leaching from natural deposits; Industrial wastes

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	East Sonora AMOUNT DETECTED (RANGE, LOW-HIGH)	Mono Village AMOUNT DETECTED (RANGE, LOW-HIGH)	Peaceful Pines AMOUNT DETECTED (RANGE, LOW-HIGH)	Phoenix Lake AMOUNT DETECTED (RANGE, LOW-HIGH)	Scenic View AMOUNT DETECTED (RANGE, LOW-HIGH)	Sonora/Jamestown AMOUNT DETECTED (RANGE, LOW-HIGH)	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2009	300	NS	ND	ND	ND	ND	ND	ND	Yes	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2009	50	NS	75 (ND–150)	16[5]	61	ND	2.6[5]	150[5]	Yes	Leaching from natural deposits
Sulfate (ppm)	2009	500	NS	4.6 (ND–92)	9.4[5]	4	4.1	ND	ND	No	Runoff/leaching from natural deposits; Industrial wastes
Zinc (ppm)	2009	5.0	NS	ND	ND	ND	ND	ND	ND	No	Runoff/leaching from natural deposits; Industrial wastes

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Upper Basin AMOUNT DETECTED (RANGE, LOW-HIGH)	Wards Ferry AMOUNT DETECTED (RANGE, LOW-HIGH)	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2009	300	NS	200 (ND–380)	ND	Yes	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2009	50	NS	82.5 (ND–250)	ND	Yes	Leaching from natural deposits
Sulfate (ppm)	2009	500	NS	6.2 (ND–14)	2.8	No	Runoff/leaching from natural deposits; Industrial wastes
Zinc (ppm)	2009	5.0	NS	0.049 (ND–0.11)	ND	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Apple Valley AMOUNT DETECTED (RANGE, LOW-HIGH)	Big Hill AMOUNT DETECTED (RANGE, LOW-HIGH)	Cedar Ridge AMOUNT DETECTED (RANGE, LOW-HIGH)	Columbia/Gibbs AMOUNT DETECTED (RANGE, LOW-HIGH)	Crystal Falls/ Willow Springs AMOUNT DETECTED (RANGE, LOW-HIGH)	Cuesta Center/Lambert Lakes AMOUNT DETECTED (RANGE, LOW-HIGH)	East Sonora AMOUNT DETECTED (RANGE, LOW-HIGH)	Mono Village AMOUNT DETECTED (RANGE, LOW-HIGH)
Hardness (ppm)	2009	150 (130–170)	8.9[5]	63.8 (7.5–120)	144.3 (8.5–280)	41.6 (7.6–78)	20[5]	75 (20–130)	180[5]
Sodium (ppm)	2009	14 (13–16)	6.5[5]	4.5 (3.5–5.4)	5.4 (4.6–6.1)	7.5 (4.3–10)	5.2[5]	8.6 (5.2–12)	17[5]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Monte Grande/ Curtis Creek AMOUNT DETECTED (RANGE, LOW-HIGH)	Peaceful Pines AMOUNT DETECTED (RANGE, LOW-HIGH)	Phoenix Lake AMOUNT DETECTED (RANGE, LOW-HIGH)	Ponderosa AMOUNT DETECTED (RANGE, LOW-HIGH)	Scenic View AMOUNT DETECTED (RANGE, LOW-HIGH)	Sonora/Jamestown AMOUNT DETECTED (RANGE, LOW-HIGH)	Tuolumne AMOUNT DETECTED (RANGE, LOW-HIGH)	Upper Basin AMOUNT DETECTED (RANGE, LOW-HIGH)	Wards Ferry AMOUNT DETECTED (RANGE, LOW-HIGH)
Hardness (ppm)	2009	9.9[5]	74	270	9.4[5]	16[5]	20[5]	8.2[5]	52.2 (7.9–94)	140
Sodium (ppm)	2009	5.9[5]	14	16	3.8[5]	6.6[5]	5.2[5]	3.5[5]	7.8 (4.3–9.2)	9.1

Definitions

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

[1] Sampled in 2005.

[2] Sampled in 2009.

[3] Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

[4] Sampled in 2010.

[5] Sampled in 2011.